

TENTATIVE RESOLUTION NO. R9-2005-0111

AND

ATTACHMENT A

**AMENDMENT TO THE WATER QUALITY CONTROL PLAN
FOR THE SAN DIEGO REGION TO INCORPORATE
TOTAL MAXIMUM DAILY LOADS FOR DISSOLVED
COPPER, LEAD AND ZINC IN CHOLLAS CREEK,
TRIBUTARY TO SAN DIEGO BAY**

**AND TO REVISE THE WATER QUALITY OBJECTIVES FOR
TOXIC POLLUTANTS**

For the Chollas Creek Metals Total Maximum Daily Loads

California Regional Water Quality Control Board, San Diego Region

**PUBLIC REVIEW DRAFT
28 MARCH 2005**

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD SAN DIEGO REGION

TENTATIVE RESOLUTION NO. R9-2005-0111

A RESOLUTION ADOPTING AN AMENDMENT TO THE WATER QUALITY CONTROL PLAN FOR THE SAN DIEGO REGION TO INCORPORATE TOTAL MAXIMUM DAILY LOADS FOR DISSOLVED COPPER, LEAD AND ZINC IN CHOLLAS CREEK, TRIBUTARY TO SAN DIEGO BAY

WHEREAS, The California Regional Water Quality Control Board, San Diego Region (hereinafter, Regional Board), finds that:

1. **BASIN PLAN AMENDMENT:** The proposed amendment of the Water Quality Control Plan for the San Diego Basin – Region 9 (Basin Plan) described in the recitals below was developed in accordance with Water Code section 13240 et seq.
2. **NECESSITY STANDARD** [Government Code section 11353(b)]: This regulatory action meets the “Necessity” standard of the Administrative Procedures Act, Government Code, section 11353, subdivision (b). Amendment of the Basin Plan to establish and implement a Total Maximum Daily Load (TMDL) for Chollas Creek is necessary because the existing water quality does not meet applicable numeric water quality objectives for copper, lead or zinc or narrative water quality objectives for toxicity. The federal Clean Water Act (CWA) section 303(d) requires the Regional Board to establish and mandate implementation of TMDLs under the water quality conditions that exist in Chollas Creek. These TMDLs for copper, lead and zinc are necessary to ensure attainment of applicable water quality objectives and restoration of beneficial uses designated for Chollas Creek.
3. **CLEAN WATER ACT SECTION 303(d):** The lowest 1.2 miles of Chollas Creek were placed on the List of Water Quality Limited Segments, as required by Clean Water Act section 303(d), in 1996 due to elevated levels of dissolved copper, lead and zinc (metals) in the water column.
4. **BENEFICIAL USE IMPAIRMENTS:** Chollas Creek has two beneficial uses impaired by elevated concentrations of dissolved metals in the water column. These sensitive beneficial uses are designated for protection of aquatic life and aquatic dependent wildlife as described in the Basin Plan definition of the warm freshwater habitat (WARM) and wildlife habitat (WILD) beneficial uses. The WARM and WILD beneficial uses of Chollas Creek are threatened or impaired due to elevated levels of dissolved copper, lead and zinc.
5. **WATER QUALITY OBJECTIVES:** The water quality objectives for dissolved copper, lead and zinc in Chollas Creek specify that concentrations should not exceed the water quality criteria set forth in the California Toxics Rule (CTR) for acute and chronic conditions. The CTR water quality criteria for dissolved copper, lead and zinc promulgated by the U.S. Environmental Protection Agency (USEPA), are the legally applicable water

quality standards in the State of California for inland surface waters, enclosed bays, and estuaries for all purposes and programs under the CWA. The water quality objectives are presented below.

Water Quality Objectives for dissolved metals in Chollas Creek.

Metal	Numeric Target for Acute Conditions: Criteria Maximum Concentration	Numeric Target for Chronic Conditions: Criteria Continuous Concentration
Copper	$(1) * (0.96) * \{e^{[0.9422 * \ln(\text{hardness}) - 1.700]}\}$	$(1) * (0.96) * \{e^{[0.8545 * \ln(\text{hardness}) - 1.702]}\}$
Lead	$(1) * \{1.46203 - [0.145712 * \ln(\text{hardness})]\} * \{e^{[1.273 * \ln(\text{hardness}) - 1.460]}\}$	$(1) * \{1.46203 - [0.145712 * \ln(\text{hardness})]\} * \{e^{[1.273 * \ln(\text{hardness}) - 4.705]}\}$
Zinc	$(1) * (0.978) * \{e^{[0.8473 * \ln(\text{hardness}) + 0.884]}\}$	$(1) * (0.986) * \{e^{[0.8473 * \ln(\text{hardness}) + 0.884]}\}$

Hardness is expressed as milligrams per liter.

Calculated concentrations should have two significant figures (40 CFR 131.38(b)(2)).

The natural log and exponential functions are represented as “ln” and “e”, respectively.

In addition, the Basin Plan establishes the following narrative water quality objective for “toxicity” to ensure the protection of the WARM and WILD beneficial uses.

Toxicity Objective: *All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration, or other appropriate methods as specified by the Regional Board.*

The survival of aquatic life in surface waters subjected to a waste discharge or other controllable water factors, shall not be less than that for the same water body in areas unaffected by the waste discharge or, when necessary, for other control water that is consistent with requirements specified in USEPA, State Water Resources Control Board (State Board) or other protocol authorized by the Regional Board. As a minimum, compliance with this objective as stated in the previous sentence shall be evaluated with a 96-hour acute bioassay.

In addition, effluent limits based upon acute bioassays of effluents will be prescribed where appropriate, additional numerical receiving water objectives for specific toxicants will be established as sufficient data become available, and source control of toxic substances will be encouraged.

- NUMERIC TARGETS:** TMDL Numeric Targets interpret and implement water quality standards (i.e., numeric and narrative water quality objectives and beneficial uses) and are established at levels necessary to achieve water quality standards. The Regional Board has

set the copper, lead and zinc TMDL Numeric Targets for both the numeric and narrative water quality objectives equal to the numeric water quality objectives cited in Finding 5. Attainment of the TMDL numeric targets will result in attainment of water quality standards in Chollas Creek.

7. **SOURCES OF DISSOLVED METALS:** An analysis of source contributions reveal many land uses and activities associated with urbanization to be potential sources of copper, lead and zinc to Chollas Creek. Modeling efforts point toward freeways and commercial/ industrial land uses as the major contributors. Review of studies from other similar urban areas confirms that automobiles can be a significant source of all three metals. Other suspected individual sources of copper, lead and zinc are water supply systems, pesticides, industrial metal recyclers and other industrial activities.
8. **WATER QUALITY OBJECTIVE VIOLATIONS:** Concentrations of dissolved copper, lead and zinc have frequently exceeded applicable water quality criteria contained in the CTR and are thus in violation of the Basin Plan narrative water quality objective for Toxicity. Furthermore, in a Toxicity Identification Evaluation performed in 1999, storm water concentrations of zinc and to a lesser extent copper, were identified as causing reduced fertility in the purple sea urchin.
9. **ADVERSE EFFECTS OF COPPER, LEAD AND ZINC:** Concentrations of copper, lead and zinc, in excess of CTR criteria, are believed to cause adverse effects in biological species. Copper, lead, and zinc may bioaccumulate within lower organisms, however they do not biomagnify up the food chain. Of these three metals, copper is considered the most potent toxin at environmentally relevant aqueous concentrations.
10. **TOTAL MAXIMUM DAILY LOADS AND ALLOCATIONS:** The assimilative or loading capacity of Chollas Creek for dissolved copper, lead and zinc is defined as the maximum amount that Chollas Creek can receive and still attain water quality objectives and protection of designated beneficial uses. The TMDL is comprised of the sum of all individual Wasteload Allocations (WLAs) for point source discharges, the sum of all Load Allocations (LAs) for nonpoint source discharges, and natural background. The TMDL includes a margin of safety (MOS) that takes into account any uncertainties in the TMDL calculation. The TMDL calculations also account for seasonal variations and critical conditions [40 Code of Federal Regulations (CFR), section 130.2(i)].

The TMDLs for dissolved copper, lead and zinc are equal to 90 percent of the CTR Criteria Continuous Concentration (CCC) and Criteria Maximum Concentration (CMC) equations. The load and wasteload allocations are equal to the TMDL. The allowable TMDL concentrations will be determined with hardness values measured at the time of compliance monitoring; thus resulting in a direct measure of any seasonal variations and/or critical condition effects on hardness.

11. **WASTELOAD REDUCTIONS:** Concentrations of dissolved copper, lead and zinc require significant reductions from current concentrations to meet the allocations. Most reductions are required at the lower range of the measured hardness and represent up to a 99 percent

reduction. However, the average reduction required is closer to 50 percent and a significant number of previously measured metal concentrations would not require a reduction to meet the proposed Numeric Targets.

12. **IMPLEMENTATION PLAN:** The necessary actions to implement the TMDL are described in the technical report entitled *Total Maximum Daily Loads for Dissolved Copper, Lead and Zinc in Chollas Creek*, dated [insert date]. These actions will be accomplished by the Regional Board and State Water Resources Control Board (State Board) by amending the WDRs that regulate MS4 discharges, industrial facility stormwater discharges, and groundwater extraction discharges in the Chollas Creek watershed.
13. **COMPLIANCE MONITORING:** Water quality monitoring will be required to assess progress in achieving WLAs and compliance in Chollas Creek with the water quality objectives for dissolved copper, lead, and zinc.
14. **COMPLIANCE SCHEDULE:** Copper, lead and zinc wasteload reductions are required over a 7-year staged compliance schedule period. No reductions are required for the first three years. The subsequent four-year period requires incremental reductions capable of achieving the percentage of allowable exceedances of the WLA in discharges until no exceedances are allowed at the end of the seventh year following approval of the TMDLs by the Office of Administrative Law (OAL).
15. **SCIENTIFIC PEER REVIEW:** The scientific basis of this TMDL has undergone external peer review pursuant to Health and Safety Code section 57-004. The Regional Board has considered and responded to all comments submitted by the peer review panel.
17. **STAKEHOLDER PARTICIPATION:** Interested persons and the public have had reasonable opportunity to participate in review of the amendment to the Basin Plan. Efforts to solicit public review and comment included five public workshops held between April 1999 and April 2005; a public review and comment period of 45 days preceding the Regional Board public hearing; and written responses from the Regional Board to oral and written comments received from the public.
18. **CEQA REQUIREMENTS:** The Regional Board's Basin Plan amendment process is certified as "functionally equivalent" to the CEQA process and is therefore exempt from CEQA's requirements to prepare an EIR, Negative Declaration, or Initial Study. The required environmental documentation (Basin Plan amendment, technical report, and environmental checklist) has been prepared. A public CEQA scoping meeting was held in March 2003.

The analysis contained in the TMDL Technical Report, the CEQA checklist, and the responses to comments comply with the requirements of the State Board's certified regulatory CEQA process, as set forth in the California Code of Regulations, Title 23, section 3375 et seq. Furthermore, the analysis fulfills the Regional Board's obligations attendant with the adoption of regulations "requiring the installation of pollution control equipment, or

a performance standard treatment or requirement,” as set forth in section 21159 of the Public Resources Code.

19. **ECONOMIC ANALYSIS:** The Regional Board has considered the costs of the reasonably foreseeable methods of compliance with the wasteload reductions specified in this TMDL.
20. **DE MINIMUS ENVIRONMENTAL EFFECTS:** This Basin Plan amendment will result in no potential for adverse effect, either individually or cumulatively, on wildlife.
21. **PUBLIC NOTICE:** The Regional Board has notified all known interested persons and the public of its intent to consider adoption of this Basin Plan amendment in accordance with Water Code section 13244.
22. **PUBLIC HEARING:** The Regional Board has, at a public meeting on [insert date], held a public hearing and heard and considered all comments pertaining to this Basin Plan amendment.
23. **REVISION TO WATER QUALITY OBJECTIVES FOR TOXIC POLLUTANTS:**
Chapter 3 of the Basin Plan needs to be revised to reflect existing federal law. The water quality objectives for toxic pollutants need to incorporate the California Toxics Rule [40 CFR 131.38] numeric criteria as water quality objectives for toxic pollutants in inland surface waters, enclosed bays, and estuaries in the San Diego Region.

In May 2000, the USEPA promulgated numeric water quality criteria for priority toxic pollutants and other water quality standard provisions to be applied to waters in California (California Toxics Rule (CTR); 40 CFR 131.38). The CTR serves as a place holder until the State re-adopts its own numeric criteria for toxics. The CTR established numeric water quality criteria legally applicable in the State of California as WQOs for inland surface waters and enclosed bays and estuaries.

The CTR does not contain acute and chronic numeric criteria for mercury to protect freshwater and saltwater aquatic life; acute numeric criteria for selenium to protect freshwater aquatic life, nor numeric criteria for chloroform. California remains in the National Toxics Rule (40 CFR 131.36), promulgated in 1992 for certain waters and pollutants.

NOW, THEREFORE, BE IT RESOLVED that

1. **AMENDMENT ADOPTION:** The Regional Board hereby adopts this amendment to the Basin Plan to incorporate the TMDLs for dissolved copper, lead and zinc in Chollas Creek as set forth in Attachment A hereto.
2. **TECHNICAL REPORT APPROVAL:** The Regional Board hereby approves the Technical Report entitled *Total Maximum Daily Loads for Dissolved Copper, Lead, and Zinc in Chollas Creek, Tributary to San Diego Bay*, dated [insert date].

3. **CERTIFICATE OF FEE EXEMPTION:** The Executive Officer is authorized to sign a Certificate of Fee Exemption.
4. **AGENCY APPROVALS:** The Executive Officer is directed to submit this Basin Plan amendment to the State Board in accordance with Water Code section 13245. The Regional Board requests that the State Board approve the Basin Plan amendment and forward it to the OAL and the USEPA for approval.
5. **NON-SUBSTANTIVE CORRECTIONS:** If, during the approval process for this amendment, the State Board or OAL determines that minor, non-substantive corrections to the language of the amendment are needed for clarity or consistency, the Executive Officer may make such changes, and shall inform the Regional Board of any such changes.

I, John H. Robertus, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, San Diego Region, on [insert date].

JOHN H. ROBERTUS
EXECUTIVE OFFICER

ATTACHMENT A TO RESOLUTION NO. R9-2005-0111

AMENDMENT TO THE WATER QUALITY CONTROL PLAN FOR THE SAN DIEGO REGION TO INCORPORATE TOTAL MAXIMUM DAILY LOADS FOR DISSOLVED COPPER, LEAD AND ZINC IN CHOLLAS CREEK, TRIBUTARY TO SAN DIEGO BAY,

AND TO REVISE THE WATER QUALITY OBJECTIVES FOR TOXIC POLLUTANTS

This Basin Plan amendment establishes a Total Maximum Daily Load (TMDL) and associated load and wasteload allocations for copper, lead and zinc in Chollas Creek. This amendment includes a program to implement the TMDL and monitor its effectiveness. Chapters 2, 3, and 4 of the Basin Plan are amended as follows:

Chapter 2, Beneficial Uses

Table 2-2. Beneficial Uses of Inland Surface Waters

Add the following footnote 3 to Chollas Creek

³Chollas Creek is designated as an impaired water body for copper, lead and zinc pursuant to Clean Water Act section 303(d). A Total Maximum Daily Load (TMDL) has been adopted to address this impairment. See Chapter 3, Water Quality Objectives for Toxicity and Toxic Pollutants and Chapter 4, Total Maximum Daily Loads.

Chapter 3, Water Quality Objectives

Inland Surface Waters, Enclosed Bays and Estuaries, Coastal Lagoons, and Ground Waters

Water Quality Objectives for Toxic Pollutants:

Revise as follows:

Federal Register, Volume 57, Number 246 amended Title 40, Code of Federal Regulations, Part 131.36 (40 CFR 131.36) and established numeric criteria for a limited number of priority toxic pollutant for inland surface waters and estuaries in California. USEPA promulgated these criteria on December 22, 1992, to bring California into full compliance with section 303(c)(2)(B) of the Clean Water Act. California is not currently in full compliance with this section of the Clean Water Act due to the invalidation of the Water Quality Control Plan for Inland Surface Waters of California and the Water Quality Control Plan for Bays and Estuaries of California. In May 2000, the USEPA promulgated numeric water quality criteria for priority toxic pollutants and other water quality standard provisions to be applied to waters in California (California Toxics Rule (CTR); 40 CFR 131.38). The CTR serves as a place holder until the State re-adopts its own numeric criteria for toxics. The CTR does not contain acute and chronic numeric criteria for mercury to protect freshwater and saltwater aquatic life; acute numeric criteria for selenium to protect freshwater

aquatic life, nor numeric criteria for chloroform. However, the criteria established in 57 FR 60848 (December 22, 1992) (specifically pages 60920-60921) are still applicable to surface waters in the Region.

Water Quality Objectives for Toxic Pollutants:

Inland surface waters, enclosed bays, and estuaries shall not contain toxic pollutants in excess of the numerical objectives applicable to California specified in 40 CFR 131.38 (section 131.38 added at 65 FR 31682-331719, May 18, 2000). 40-CFR131.36 (§ section131.36 revised at 57 FR60848, December 22, 1992).

Chollas Creek is designated as a water quality limited segment for dissolved copper, lead and zinc pursuant to Clean Water Act section 303(d). Total Maximum Daily Loads have been adopted to address these impairments. See Chapters 2, Table 2-2, Beneficial Uses of Inland Surface Waters, Footnote 3 and Chapter 4, Total Maximum Daily Loads.

Chapter 4, Implementation

After the subsection on the TMDL for Dissolved Copper, Shelter Island Yacht Basin, San Diego Bay add the following subsection:

Total Maximum Daily Loads for Copper, Lead and Zinc in Chollas Creek

On [insert date], the Regional Board adopted Resolution No. R9-2005-0111, *A Resolution Adopting an Amendment to the Water Quality Control Plan for the San Diego Region to Incorporate Total Maximum Daily Loads for Dissolved Copper, Lead and Zinc in Chollas Creek, Tributary to San Diego Bay*. The TMDL Basin Plan Amendment was subsequently approved by the State Water Resources Control Board on [Insert Date], the Office of Administrative Law on [Insert Date], and the United States Environmental Protection Agency on [Insert Date].

Problem Statement

Dissolved copper, lead and zinc concentrations in Chollas Creek violate numeric water quality objectives for copper, lead, zinc promulgated in the California Toxics Rule, and the narrative objective for toxicity. Concentrations of these metals in Chollas Creek threaten and impair the designated beneficial uses of warm freshwater habitat (WARM), and wildlife habitat (WILD).

Numeric Targets

The TMDL Numeric Targets for copper, lead and zinc are set equal to the numeric water quality objectives as defined in the California Toxics Rule (CTR) and shown below. Because the concentration of a dissolved metal causing a toxic effect varies significantly with hardness, the water quality objectives are expressed in the CTR as hardness based equations. The numeric targets are equal to the loading capacity of these metals in Chollas Creek.

Table 4. *[insert number]* Water Quality Objectives/Numeric Targets for dissolved metals in Chollas Creek.

Metal	Numeric Target for Acute Conditions: Criteria Maximum Concentration	Numeric Target for Chronic Conditions: Criteria Continuous Concentration
Copper	$(1) * (0.96) * \{e^{[0.9422 * \ln(\text{hardness}) - 1.700]}\}$	$(1) * (0.96) * \{e^{[0.8545 * \ln(\text{hardness}) - 1.702]}\}$
Lead	$(1) * \{1.46203 - [0.145712 * \ln(\text{hardness})]\} * \{e^{[1.273 * \ln(\text{hardness}) - 1.460]}\}$	$(1) * \{1.46203 - [0.145712 * \ln(\text{hardness})]\} * \{e^{[1.273 * \ln(\text{hardness}) - 4.705]}\}$
Zinc	$(1) * (0.978) * \{e^{[0.8473 * \ln(\text{hardness}) + 0.884]}\}$	$(1) * (0.986) * \{e^{[0.8473 * \ln(\text{hardness}) + 0.884]}\}$

Hardness is expressed as milligrams per liter.

Calculated concentrations should have two significant figures (40 CFR 131.38(b)(2)).

The natural log and exponential functions are represented as “ln” and “e”, respectively.

Source Analysis

The vast majority of metals loading to Chollas Creek are believed to come through the storm water conveyance system. An analysis of source contributions reveals many land uses and activities associated with urbanization to be potential sources of copper, lead and zinc to Chollas Creek. Modeling efforts point toward freeways and commercial/industrial land uses as the major contributors

Total Maximum Daily Loads

The TMDLs for dissolved copper, lead and zinc in Chollas Creek is concentration-based and set equal to 90 percent of the Numeric Targets/Loading Capacity.

Margin of Safety

The TMDL includes an explicit margin of safety (MOS). Ten percent of the loading capacity was reserved as an explicit MOS.

Allocations and Reductions

The source analysis showed that nonpoint sources and background concentrations of metals are insignificant, and thus, were set equal to zero in the TMDL calculations. The wasteload allocations are set equal to 90 percent of the numeric targets/loading capacity. Concentrations of dissolved copper, lead and zinc require significant reductions from current concentrations to meet the loading capacity. Most reductions are required at the lower range of the measured hardness and represent up to a 99 percent reduction. However, the average reduction required is closer to 50 percent and a significant number of previously measured metal concentrations meet the proposed loading capacity.

TMDL Implementation Plan

Persons whose point source discharges contribute to the exceedance of WQOs for copper, lead and zinc in Chollas Creek will be required to meet the WLA hardness dependant concentrations

in their urban runoff discharges before it is discharged to Chollas Creek. Actions to meet the WLAs in discharges to Chollas Creek will be required in WDRs that regulate MS4 discharges, industrial facility stormwater discharges, and groundwater extraction discharges in the Chollas Creek watershed. The following orders will be amended by the Regional Board to include actions to meet the WLAs:

Order No. 2001-01, NPDES No. CAS0108758, Waste Discharge Requirements for Discharges of Urban Runoff from the Municipal Separate Storm Sewer Systems Draining the Watersheds of the County of San Diego, the Incorporated Cities of San Diego County, and the San Diego Unified Port District, or subsequent superceding NPDES renewal orders.

Order No. 2000-90, NPDES No. CAG19001, General Waste Discharge Requirements for Temporary Groundwater Extraction and Similar Waste Discharges to San Diego Bay and Storm Drains or other Conveyance Systems Tributary Thereto, or subsequent superceding NPDES renewal orders.

The Regional Board shall request the State Water Resources Control Board to amend the following statewide orders:

Order No. 99-06-DWQ, NPDES No. CAS000003, National Pollutant Discharge Elimination System (NPDES) Permit, Statewide Storm Water Permit, and Waste Discharge Requirements (WDRs) for the State of California, Department of Transportation (Caltrans), or subsequent superceding NPDES renewal orders.

Order No. 97-03-DWQ, NPDES No. CAS 000001, Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities, or subsequent superceding NPDES renewal orders.

Order No. 2003-0005-DWQ, NPDES No. CAS000004, Waste Discharge Requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems, or subsequent superceding NPDES renewal orders.

With respect to specific orders and dischargers, the Regional Board shall:

1. **CalTrans – Amend Order No. 99-06-DWQ, Statewide WDRs for CalTrans MS4 Discharges**

The Regional Board shall request the SWRCB amend Order No. 99-06, the statewide CalTrans NPDES MS4 order to include the following:

- a. The WLAs and schedule of compliance applicable to MS4 discharges into Chollas Creek described in Table 4.**[insert number]**.
- b. A requirement to implement an iterative BMP approach of expanded or better-tailored BMPs to attain the WLAs in Table 4.**[insert number]** in accordance with the compliance schedule in Table 4.**[insert number]**.

- c. A requirement to submit annual progress reports to the Regional Board on the progress in attaining the WLAs in urban runoff discharges and WQOs in Chollas Creek. The reports shall be due on April 1 of each year and shall be incorporated within the report required by section 2, Program Management of Order No. 99-06. Reporting shall continue on an annual basis until the metals WQOs are attained and maintained in Chollas Creek.

The reports should describe the BMPs being implemented by CalTrans in the Chollas Creek watershed and additional BMPs that will be implemented. The reports should describe the steps CalTrans will take to develop a long-term strategy for assessing the effectiveness of its BMPs. The long-term assessment strategy should identify specific direct and indirect measurements that it will use to track the long-term progress towards achieving the copper, lead and zinc load reductions required under this TMDL. Methods used for assessing effectiveness should include the following or their equivalent: surveys, pollutant loading estimations, and receiving water quality monitoring. The long-term strategy should also discuss the role of monitoring data in substantiating or refining the assessment.

2. Municipal Dischargers¹ - Amend Regional Board Order No. 2001-01, WDRs for San Diego County MS4 Discharges

The Regional Board shall amend Order No. 2001-01 to include:

- a. The WLAs and schedule of compliance applicable to MS4 discharges into Chollas Creek described in Table 4. *[insert number]*.
- b. A requirement to implement an iterative BMP approach of expanded or better-tailored BMPs to attain the WLAs in Table 11.1 in accordance with the compliance schedule in Table 4. *[insert number]*.
- c. A requirement that the Municipal Dischargers submit annual progress reports to the Regional Board on the progress in attaining the WLAs in effluent discharges and WQOs in Chollas Creek. Annual reports shall cover the period of July 1 through June 30. The reports shall be submitted to the Regional Board by January 31 of the following year and shall be incorporated within the annual receiving water monitoring reports required in Table 6, Item 28, page 51 of Order No. 2001-01. Reporting shall continue on an annual basis until the metal water quality objectives are attained and maintained in Chollas Creek.

The reports should describe the BMPs being implemented by the Municipal Dischargers in the Chollas Creek watershed and additional BMPs that will be implemented. The reports should describe the steps the Municipal Dischargers will take to develop a long-term strategy for assessing the effectiveness of their BMPs. The long-term assessment strategy should identify specific direct and indirect

¹ The Municipal Dischargers are the cities of San Diego, Lemon Grove, and La Mesa, the County of San Diego, and the San Diego Unified Port District.

measurements that they will use to track the long-term progress towards achieving the copper, lead and zinc WLAs required under this TMDL Project. Methods used for assessing effectiveness should include the following or their equivalent: surveys, pollutant loading estimations, and receiving water quality monitoring. The long-term strategy should also discuss the role of monitoring data in substantiating or refining the assessment.

For copper, lead and zinc discharges in urban runoff to or from MS4s within the Chollas Creek watershed, the Municipal Dischargers have an existing obligation under Order 2001-01 to require increasingly stringent BMPs, pursuant to the iterative process described in Receiving Water Limitation C.2.a.² of the Order, to reduce metal discharges in the Chollas Creek watershed to the maximum extent practicable and to restore compliance with the copper, lead and zinc components of the toxic pollutants water quality objectives.

3. Municipal Dischargers and the Navy – Amend Order No. R9-2004-0277, Chollas Creek Investigation and Monitoring Program for Diazinon and Metals

The Regional Board shall amend Order No. R9-2004-0277 to include the following:

A requirement that the Municipal Dischargers and CalTrans to investigate excessive levels of metals in Chollas Creek and feasible management strategies to reduce metal loadings in Chollas Creek. The amendment will require additional monitoring to collect the data necessary to refine the watershed wash-off model to provide a more accurate estimate of the mass loads of copper, lead and zinc leaving Chollas Creek each year.

4. Amend Order No. R9-2000-90, General WDRs for Groundwater Extraction Discharges

The Regional Board will amend Order No. R9-2000-90, which regulates temporary groundwater extraction discharges to San Diego Bay and its tributaries. The effluent limitations for copper, lead, and zinc shall be revised to equal the WLAs for extracted groundwater discharges to MS4s in the Chollas Creek watershed, and directly to Chollas Creek. Regulated groundwater discharges to Chollas Creek must meet the WLAs at the initiation of the discharge. No schedule to meet interim goals will be allowed in the case of groundwater discharges. A revision of the receiving water limitations is not required since they are equal to the WQOs for metals in Chollas Creek.

5. Amend Order No. 97-03-DWQ, Statewide General WDRs for Industrial Facilities Stormwater Discharges

² Receiving Water Limitation C.2.a provides that “[u]pon a determination by either the Copermittee or the Regional Board that MS4 discharges are causing or contributing to an exceedance of an applicable water quality standard, the Copermittee shall promptly notify and thereafter submit a report to the Regional Board that describes BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of water quality standards...”

The Regional Board shall request the SWRCB amend Order No. 97-03-DWQ, the statewide general WDRs that regulate stormwater discharges from industrial sites to include the following:

- a. The WLAs and schedule of compliance applicable to industrial facility stormwater discharges into Chollas Creek described in Table 4.*[insert number]*.
- b. A requirement to implement an iterative BMP approach of expanded or better-tailored BMPs to attain the WLAs in Table 11.1 in accordance with the compliance schedule in Table 4.*[insert number]*.
- c. A requirement to submit annual progress reports to the Regional Board on the progress in attaining the WLAs in effluent discharges. The reports shall be due on July 1 of each year and shall be incorporated within the annual report required by section A.14 of Order No. 97-03-DWQ. Reporting shall continue on an annual basis until the metals WQOs are attained and maintained in Chollas Creek.

The report should describe the steps industrial dischargers will take to develop a long-term strategy for assessing the effectiveness of its BMPs. The long-term assessment strategy should identify specific direct and indirect measurements that it will use to track the long-term progress towards achieving the copper, lead and zinc load reductions required by this TMDL. Methods used for assessing effectiveness should include the following or their equivalent: surveys, pollutant loading estimations, and receiving water quality monitoring. The long-term strategy should also discuss the role of monitoring data in substantiating or refining the assessment.

6. Take Enforcement Actions

The Regional Board shall consider enforcement action,³ as necessary, against any discharger failing to comply with applicable waiver conditions, WDRs, discharge prohibitions, or take enforcement action, as necessary, to control the discharge of metals to Chollas Creek, to attain compliance with the metals WLAs specified in this Technical Report, or to attain compliance with the metals WQOs. The Regional Board may also terminate the applicability of waivers and issue WDRs or take other appropriate action against any discharger(s) failing to comply with the waiver conditions.

7. Recommend High Priority for Grant Funds

The Regional Board shall recommend that the SWRCB assign a high priority to awarding

³ An enforcement action is any formal or informal action taken to address an incidence of actual or threatened noncompliance with existing regulations or provisions designed to protect water quality. Potential enforcement actions including notices of violation (NOVs), notices to comply (NTCs), imposition of time schedules (TSO), issuance of cease and desist orders (CDOs) and cleanup and abatement orders (CAOs), administrative civil liability (ACL), and referral to the attorney general (AG) or district attorney (DA). The Regional Board generally implements enforcement through an escalating series of actions to: (1) assist cooperative dischargers in achieving compliance; (2) compel compliance for repeat violations and recalcitrant violators; and (3) provide a disincentive for noncompliance.

grant funding⁴ for projects to implement the Chollas Creek metal TMDLs. Special emphasis will be given to projects that can achieve quantifiable metal load reductions consistent with the specific metal TMDL WLAs.

8. Enroll the Navy in Order No. 2003-0005-DWQ, Statewide general WDRs for Discharges from Small MS4s

Upon receipt of a complete Report of Waste Discharge (ROWD), the Regional Board shall enroll the Navy community facilities of Naval Base San Diego under Order No. 2003-0005-DWQ.

Implementation Monitoring Plan

The dischargers will be required to monitor Chollas Creek and provide monitoring reports to the Regional Board for the purpose of assessing the effectiveness of the management practices implemented to meet the TMDL allocations. Such monitoring is required by Order No. R9-2004-0277.⁵ The Regional Board shall amend that Order to include a requirement that the Municipal Dischargers, and CalTrans investigate excessive levels of metals in Chollas Creek and feasible management strategies to reduce metal loadings in Chollas Creek, and conduct additional monitoring to collect the data necessary to refine the watershed wash-off model to provide a more accurate estimate of the mass loads of copper, lead and zinc leaving Chollas Creek each year.

Schedule of Compliance

Concentrations of metals in urban runoff shall only be allowed to exceed the WLAs by a certain percentage for the first five years after adoption of this TMDL. Allowable concentrations shall decrease by 20 percent each year during this time as shown in Table 4.[insert number]. For example, if the measured hardness in year four dictates the WLA for copper in urban runoff is 10 µg/l, the maximum allowable measured copper concentration would be 14 µg/L. By the end of the seventh year of this TMDL, the WLAs of this TMDL shall be met. This will ensure that copper, lead and zinc water quality objectives are being met at all locations in the creek during all times of the year.

Compliance with the interim goals in this schedule can be assessed by showing that dissolved metals concentrations in the receiving water exceed the WQOs for copper, lead, and zinc by no more than the allowable exceedances for WLAs shown in the table above. Regulated groundwater discharges to Chollas Creek must meet the WLAs at the initiation of the discharge. No schedule to meet interim goals will be allowed in the case of groundwater discharges.

⁴ The SWRCB administers the awarding of grants funded from Proposition 13, Proposition 50, Clean Water Act 319(h) and other federal appropriations to projects that can result in measurable improvements in water quality, watershed condition, and/or capacity for effective watershed management. Many of these grant fund programs have specific set-asides for expenditures in the areas of watershed management and TMDL project implementation for non-point source pollution.

⁵ Order No. R9-2004-0277, *California Department of Transportation and the San Diego Municipal Separate Storm Sewer System Copermittees Responsible for the Discharge of Diazinon into the Chollas Creek Watershed, San Diego, California.*

Table 4. *[insert number]* Compliance schedule and interim goals for achieving Wasteload Allocations

	Allowable Exceedance of the WLAs (allowable percentage above)		
Compliance Year (year after OAL approval)	Copper	Lead	Zinc
1	100%	100%	100%
2	100%	100%	100%
3	100%	100%	100%
4	50%	50%	50%
5	25%	25%	25%
6	10%	10%	10%
7	0%	0%	0%